L Number	Hits	Search Text	DB	Time stamp
-	7	((payload or thread) near5 process near5 complet$2) near5 ((monitor or count or track or determin$2 or surveillance or watch or investigat$2 or plot))	USPAT; US-PGPUB	2004/08/31 15:38
-	6	(((payload or thread) near5 process near5 complet$2) near5 ((monitor or count or track or determin$2 or surveillance or watch or investigat$2 or plot))) and @ad<20010508	USPAT; US-PGPUB	2004/08/31 15:43
-	2	(thread near5 time near5 complet$2) near5 (formula or "=" or equal or calculat$2 or performance or efficien$3 or equation or math)	USPAT; US-PGPUB	2004/08/31 15:51
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-	19	((thread near5 (formula or "=" or equal or calculat$2 or performance or efficien$3 or equation or math or comput$3)) near5 (scale or scaling or factor))	USPAT; US-PGPUB	2004/08/31 16:04
-	19	((thread near5 (formula or "=" or equal or calculat$2 or performance or efficien$3 or equation or math or comput$3or algorithm or expression or computed or divide)) near5 (scale or scaling or factor))	USPAT; US-PGPUB	2004/08/31 16:06
-	77	((protocol near5 (formula or "=" or equal or calculat$2 or performance or efficien$3 or equation or math or comput$3or algorithm or expression or computed or divide)) near5 (scale or scaling or factor))	USPAT; US-PGPUB	2004/08/31 16:06
-	44	((protocol near5 (formula or "=" or equal or calculat$2 or performance or efficien$3 or equation or math or comput$3or algorithm or expression or computed or divide)) near5 (scale or scaling or factor)) and @ad<20010508	USPAT; US-PGPUB	2004/08/31 16:45
-	349	((network near5 (formula or "=" or equal or calculat$4 or performance or efficien$3 or equation or math or computation or algorithm or expression or computed or divide)) near5 (scale or scaling or factor)) and @ad<20010508	USPAT; US-PGPUB	2004/08/31 16:51
-	22	(((network near5 (formula or "=" or equal or calculat$4 or performance or efficien$3 or equation or math or computation or algorithm or expression or computed or divide)) near5 (scale or scaling or factor)) and @ad<20010508) and thread	USPAT; US-PGPUB	2004/08/31 16:50
-	101	(((network near5 (formula or "=" or equal or calculat$4 or performance or efficien$3 or equation or math or computation or algorithm or expression or computed or divide)) near5 (scale or scaling or factor)) and @ad<20010508) and test	USPAT; US-PGPUB	2004/08/31 16:50
-	89	((execution near5 (formula or "=" or equal or calculat$4 or performance or efficien$3 or equation or math or computation or algorithm or expression or computed or divide)) near5 (scale or scaling or factor)) and @ad<20010508	USPAT; US-PGPUB	2004/08/31 16:52
-	295	client near5 server near5 thread	USPAT; US-PGPUB	2004/09/01 08:42
-	199	client near5 server near5 thread and @ad<20010508	USPAT; US-PGPUB	2004/09/01 08:44
-	25	((client near5 server near5 thread) near5 (performance or efficiency or speed or execution or time)) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 09:10
-	1721	(network near5 performance near5 (data or information)) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 09:12
-	3319597	(network near5 performance near5 (data or information)) near5 (gather or collect or present or display or synthesize or assemble or amass or cumulate) @ad<20010508	USPAT; US-PGPUB	2004/09/01 09:14
-	75	(network near5 performance near5 (data or information)) near5 (gather or collect or present or display or synthesize or assemble or amass or cumulate) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 09:15
-	0	(network near5 performance near5 (data or information)) near5 (gather or collect or present or display or synthesize or assemble or amass or cumulate) near5 (thread or transaction) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 09:16
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-	22	(network near5 performance near5 (data or information or metrics)) near5 (gather or collect or present or display or synthesize or assemble or amass or cumulate) and (thread or transaction) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 09:17

-	23	(network near5 performance near5 (data or information or metrics or test or measurement)) near5 (gather or collect or present or display or synthesize or assemble or amass or cumulate) and (thread or transaction) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 10:20
-	1600	(thread or transaction) near5 (ratio or divide or calculate or compute or measure) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 10:19
-	0	(network near5 performance near5 (data or information or metrics or test or measurement)) near5 (gather or collect or present or display or synthesize or assemble or amass or cumulate) and ((thread or transaction) near5 (ratio or divide or calculate or compute or measure or percentage)) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 10:29
-	13316	(network near5 performance near5 (data or information or metrics or test or measurement)) near5 (gather or collect or present or display or synthesize or assemble or amass or cumulate) and ((thread or transaction) near5 (ratio or divide or calculate or compute or measure or percentage)) or ((second near5 (thread or transaction))) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 10:28
-	7	(network near5 performance near5 (data or information or metrics or test or measurement)) near5 (gather or collect or present or display or synthesize or assemble or amass or cumulate) and ((thread or transaction) NEAR5 (second or ratio or divide))	USPAT; US-PGPUB	2004/09/01 10:31
-	94198	(network and (ratio or divide)) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 10:40
-	1	((network near4 performance near4 data) NEAR5 (ratio or divide)) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 10:50
-	10	(((computer OR network) near4 performance near4 data) NEAR5 (ratio or divide)) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 11:30
-	0	(((thread) near4 performance near4 data) NEAR5 (ratio or divide)) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 11:31
-	1	(threads NEAR5 scaling NEAR5 factor) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:14
-	929	thread NEAR5 efficien$3	USPAT; US-PGPUB	2004/09/01 14:15
-	716	thread NEAR5 efficien$3 and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:40
-	0	(thread NEAR5 efficien$3) and (modif$3 NEAR5 scaling NEAR5 factor) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:34
-	2	(thread NEAR5 execution NEAR5 heuristics) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:35
-	3	(thread NEAR5 heuristics) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:39
-	3794	(protocol NEAR5 test) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:40
-	138	(protocol NEAR5 test) and thread and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:41
-	74	(protocol NEAR5 test) and thread and performance and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:41
-	45	(protocol NEAR5 test) and thread and performance and network and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:41
-	45	(protocol NEAR5 test) and thread and performance and network and (ratio or time or calculate or divide or algorithm) and @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:43
-	3319544	(protocol NEAR5 test) and thread and performance and network and factor @ad<20010508	USPAT; US-PGPUB	2004/09/01 14:43
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-	5	(protocol NEAR5 test) and thread and performance and network and factor and @ad<20010508 and computer	USPAT; US-PGPUB	2004/09/01 15:09
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-	88	(thread NEAR5 (execution or complet) NEAR5 time) and @ad<20010508 and (performance or measurement) and protocol	USPAT; US-PGPUB	2004/09/01 15:30

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-	54	(SSL or LDAP or TCP or IAMP) and @ad<20010508 and (performance or measurementor testing) and protocol and ((thread or transaction) NEAR5 (execution or complet) NEAR5 time)	USPAT; US-PGPUB	2004/09/01 15:49
-	54	(SSL or LDAP or TCP or IAMP) and @ad<20010508 and (performance or measurement or testing) and protocol and ((thread or transaction) NEAR5 (execution or complet) NEAR5 time)	USPAT; US-PGPUB	2004/09/01 15:49
-	54	(SSL or LDAP or TCP or IAMP) and @ad<20010508 and (performance or measurement or testing) and protocol and ((thread or transaction) NEAR5 (execution or complet) NEAR5 time)	USPAT; US-PGPUB	2004/09/01 15:50
-	14	(SSL or LDAP or TCP or IAMP) and @ad<20010508 and (performance or measurement or testing) and protocol and ((thread or transaction) NEAR5 (execution or complet) NEAR5 time) and socket	USPAT; US-PGPUB	2004/09/01 15:50
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-	3289	((thread or transaction) NEAR5 time) and thread	USOCR	2004/09/01 16:05
-	286	((thread or transaction) NEAR5 time) and (performance or testing or measurement)	USOCR	2004/09/01 16:06
-	20	((thread or transaction) NEAR5 time) and (performance or testing or measurement) and network	USOCR	2004/09/01 16:07
-	4	((thread or transaction) NEAR5 time) and (performance or testing or measurement) and network and computer	USOCR	2004/09/01 16:11
-	181	((transaction or program) NEAR5 time) and (performance or testing or measurement) and network and computer	USOCR	2004/09/01 16:11
-	12	((transaction or program) NEAR5 (execution or completion) NEAR5 time) and (performance or testing or measurement) and network and computer	USOCR	2004/09/01 16:22
-	1378	((CPU or processing or processor) NEAR5 time) and (performance or testing or measurement)	USOCR	2004/09/01 16:23
-	162	((CPU or processing or processor) NEAR5 time) and (performance or testing or measurement) and network and computer	USOCR	2004/09/01 16:23
-	10	((CPU or processing or processor) NEAR5 (execution or complet) NEAR5 time) and (performance or testing or measurement) and network and computer	USOCR	2004/09/01 16:26
-	1165	((CPU or processing or processor) NEAR5 (execution or complet) NEAR5 time) and (performance or testing or measurement) and network and computer	USPAT; US-PGPUB	2004/09/01 16:26
-	263	((CPU or processing or processor) NEAR5 (execution or complet) NEAR5 time) and (performance or testing or measurement) and network and computer and thread	USPAT; US-PGPUB	2004/09/01 16:26

-	107	((CPU or processing or processor) NEAR5 (execution or complet) NEAR5 time) and (performance or testing or measurement) and network and computer and thread and protocol	USPAT; US-PGPUB	2004/09/01 16:27
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-	0	((CPU or processing or processor) NEAR5 (execution or complet) NEAR5 time) and (performance or testing or measurement) and network and computer and thread and protocol and @ad<20010508 and (scaling NEAR5 factor)	USPAT; US-PGPUB	2004/09/01 16:28
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-	6505	(thread information) and (method NEAR5 (performance or testing or measurement)) and protocol and @ad<20010508	USPAT; US-PGPUB	2004/09/01 16:39
-	56	(thread NEAR5 information) and (method NEAR5 (performance or testing or measurement)) and protocol and @ad<20010508	USPAT; US-PGPUB	2004/09/01 16:39
-	56	(thread NEAR5 information) and (method NEAR5 (performance or testing or measurement or benchmark)) and protocol and @ad<20010508	USPAT; US-PGPUB	2004/09/01 16:41
-	526	((thread or transaction or CPU) NEAR5 information) and (method NEAR5 (performance or testing or measurement or benchmark)) and protocol and @ad<20010508	USPAT; US-PGPUB	2004/09/01 16:41
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-	110	(thread NEAR5 (information or time)) and (method NEAR5 (performance or testing or measurement or benchmark)) and protocol and @ad<20010508	USPAT; US-PGPUB	2004/09/01 16:51
-	89	(thread NEAR5 time) and (method NEAR5 (performance or testing or measurement or benchmark)) and protocol and @ad<20010508	USPAT; US-PGPUB	2004/09/01 16:51
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-	2090	(measure or capture or track) NEAR5 (thread or transaction or CPU or processing) NEAR5 (time or execution or information or length) and @ad<20010508	USPAT; US-PGPUB	2004/09/02 08:12
-	1	(measure or capture or track) NEAR5 (thread or transaction or CPU or processing) NEAR5 (time or execution or information or length) and @ad<20010508 and (method NEAR5 (testing or measuring) NEAR5 protocol)	USPAT; US-PGPUB	2004/09/02 08:14

DataStar Web

Documents

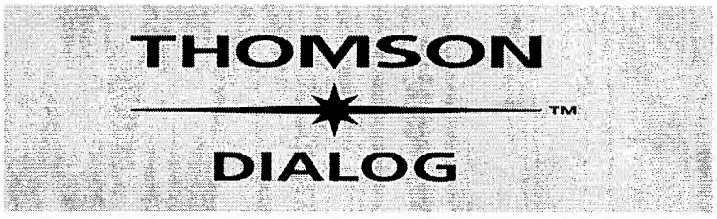

Table of Contents

Capture and restoration of the *execution* context of a *thread* in the Java environment.

Accession number & update

6489162, C2000-03-6150N-042; 20000201.

Author(s)

Bouchenak-S; Hagimont-D; Rousset-de-Pina-X.

Author affiliation

Inst Nat de Recherche en Inf et Autom, Montbonnot St Martin, France.

Source

Proceedings of CFSE: First French Conference on Operating Systems, Rennes, France, 8-11 June 1999. In: p.69-84, 1999.

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Publication type

CPP Conference Paper.

Treatment codes

P Practical.

Abstract

Today, distributed computing over the Internet is closely linked with Java. The Java virtual machine is ported to most of the current operating systems and provides many services which help in the development of distributed applications (e.g. RMI). In Java, mobility is a very important aspect. Java provides a serialisation mechanism which allows the ***capture*** and restoration of object states and therefore to migrate objects between machines. It also allows classes to be dynamically loaded and therefore to be moved between nodes. However, Java does not provide a mechanism for capturing and restoring a ***thread*** state. The stack of a Java ***thread*** is not accessible. Such a mechanism would notably allow a ***thread*** to be checkpointed or migrated between different nodes. We report on our experience which consisted in extending the Java virtual machine in order to allow the ***capture*** and restoration of a ***thread*** state. We overview the implementation of this extension and provide preliminary results of its evaluation. (19 refs).

Descriptors

distributed-programming; Java; multi-threading; object-oriented-programming; program-processors; virtual-machines.

Keywords

execution context; ***thread;*** Java environment; distributed computing; Internet; Java virtual machine; distributed applications; RMI; serialisation mechanism; object states.

Classification codes

C6150N (Distributed systems software).
C6110J (Object-oriented programming).
C6140D (High level languages).
C6150C (Compilers, interpreters and other processors).

Copyright statement

Performance measurements for multithreaded programs.

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Author(s)
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SIGMETRICS '98/PERFORMANCE'98. Joint International Conference on Measurement and Modeling of Computer Systems, Madison, WI, USA, 22-26 June 1998.
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A Application; P Practical.

Abstract
Multithreaded programming is an effective way to exploit concurrency, but it is difficult to debug and tune a highly threaded program. This paper describes a performance tool called Tmon for monitoring, analyzing and tuning the performance of multithreaded programs. The performance tool has two novel features: it uses ***"thread*** waiting ***time"*** as a ***measure*** and constructs ***thread*** waiting graphs to show ***thread*** dependencies and thus performance bottlenecks, and it identifies "semi-busy-waiting" points where CPU cycles are wasted in condition checking and context switching. We have implemented the Tmon tool and, as a case study, we have used it to ***measure*** and tune a heavily threaded file system. We used four workloads to tune different aspects of the file system. We were able to improve the file system bandwidth and throughput significantly. In one case, we were able to improve the bandwidth by two orders of magnitude. (21 refs).

Descriptors
parallel-programming; performance-evaluation; synchronisation.

Keywords
performance measurements; multithreaded programs; concurrency; highly threaded program; performance tool; Tmon; ***thread*** waiting ***time;*** performance bottlenecks; semi busy waiting; CPU cycles; condition checking; context switching.

Classification codes
C5470 (Performance evaluation and testing).
C6110P (Parallel programming).

Copyright statement

Memory management strategies for C++.

USPTO Full Text Retrieval Options

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4492139, C9311-6150J-005; 930922.

Author(s)

Lethaby-N; Black-K.

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Abstract

The article examines some of the challenges posed to embedded systems designers by C++ memory usage and presents some solutions that can dramatically increase system performance and prevent loss of useful memory to the system. The authors begin by looking at how memory can be most efficiently allocated from the heap to C++ objects and how to take advantage of operator overloading to increase the speed of allocation for particular classes. They then outline the potential for memory leakage when a multithreaded (or multitasking) ***real-time*** operating system is used in conjunction with C++, and how this problem can be avoided by allowing the operating system to ***track*** which objects are associated with a particular ***thread*** of ***execution.*** Several implementation examples, all based on the pSOS+ ***real-time*** operating system, are used to illustrate techniques for improving memory management in both single- and multi-threaded embedded systems. (0 refs).

Descriptors

C-language; object-oriented-languages; operating-systems-computers; ***real-time-systems;*** storage-management.

Keywords

memory management; C ; embedded systems designers; memory usage; system performance; heap; C objects; operator overloading; memory leakage; real ***time*** operating system; pSOS ; multi threaded embedded systems.

Classification codes

C6150J (Operating systems).
C6110J (Object-oriented programming).
C6140D (High level languages).
C6120 (File organisation).

Search strategy

No.	Database	Search term	Info added since	Results
2	INZZ	(measure OR capture OR track) NEAR thread NEAR (time OR execution OR information)	unrestricted	3

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